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35th ANNUAL MCGRAW-HILL SPRING SURVEY OF BUSINESS' PLANS FOR NEW PLANTS AND EQUIPMENT, 1982-85

American business plans to raise domestic capital spending a scant 3.9% in 1982 to \$334 billion. If those plans are realized, it would make 1982 the worst year for capital investment growth since 1975 when spending for new plant and equipment rose less than 1%.

With capital goods inflation projected at 8.8%, the planned spending increase this year translates into a drop of 4.5%. And that would make 1982 the worst year for real expenditure growth since 1975.

At the same time, business' plans to purchase new plant and equipment beyond 1982 appear fairly robust. In particular, capital goods producers themselves seem ready to gear up for what they hope could be a capital spending boom.

These are the key findings of McGraw-Hill's "35th Annual Survey of Business' Plans for New Plants and Equipment." The survey, conducted in March and April, drew responses from more than 400 companies that account for one-third of capital expenditures in the U.S. The data in this report are adjusted to represent spending by all U.S. companies, however, not just the spending of firms in the survey sample.

The Cutbacks Continue

As markets and profit margins continued to deteriorate early this year, and as interest rates remained at Olympian heights, U.S. companies took another whack at their 1982 capital budgets. They now foresee an inflation-adjusted decline in capital spending this year of 4.5%--down more than two percentage points from just a few months earlier and off 4.5 points from last fall (see Chart I). As the economy crumbled, that is, companies responded by cutting capital projects.

Chart I. Capital Budgets Get Axed

<u>1982 Projections</u>	<u>-----McGraw-Hill Surveys-----</u>		
	<u>Fall</u>	<u>Winter</u>	<u>Spring</u>
Planned Capital Spending Increase (%)	9.6	6.9	3.9
Expected Capital Goods Inflation (%)	9.6	9.4	8.8
"Real" Capital Spending Change (%)	0.0	-2.3	-4.5

NOTE: The fall survey was conducted in September and October of 1981, the winter survey in January and February of 1982, and the spring survey in March and April of 1982. All results refer to 1982.

While the survey results hardly portend anything good for capital spending in 1982, there is at least a glimmer of optimism that can be read into the figures. One thing is the decline in inflationary expectations--down from 9.6% a half year ago to 8.8% at present. Another is that capital expenditures always lag behind the business cycle; so with the economy plummeting in the last quarter of

1981 and the first quarter of 1982, it would be usual for firms to cut spending. Yet if current plans are realized, the spending slash this year would still be far less than in 1975, though deeper than in most years marking a switch from recession to recovery (see Chart II).

Chart II. Real Capital Spending Falls in Turnaround Years

<u>Year</u>	<u>% Change in Real Expenditures for New Plant & Equipment</u>
1954	-1.4%
1958	-12.5
1961	-1.3
1967	-1.4
1971	-2.4
1975	-11.5

Given the dismal state most industries are in, shown in Chart III, it may be surprising that capital budgets aren't getting whacked even harder a la 1975. For with orders down, there is no incentive to expand capacity; with profits squeezed, there is every incentive to conserve cash; and with plants operating far under capacity, there is no need to embark on major plant construction.

In the near term, though, it may appear that capital spending is in fact falling into a canyon. That's because spending in real terms held up during 1982's first quarter. So if real spending for the year as a whole drops 4.5% while not falling at all in the first quarter, it must fall substantially in at least one quarter. And judging

Chart III. Industry Has Little Reason to Buy Capital Goods Now

	% Change Versus Year Ago		Recent
	New Orders	Profits	Operating Rate (%)
Iron & Steel	-33.7	loss	-57.2
Nonferrous Metals	-21.6	-43.2	71.0
Electrical Machinery	0.3	-9.5	69.8
Machinery	-2.8	5.6	67.4
Autos, Trucks, Parts	-10.2	45.5	46.5
Aerospace	34.3	-17.8	NA
Fabricated Metals	-10.8	-23.1	68.4
Instruments	-0.9	-6.7	66.9
Stone, Clay, Glass	-10.6	-47.7	61.2
Other Durables	-12.7	-36.9	57.2
TOTAL DURABLES	-7.1	-18.0	63.0
Chemicals	NA	6.5	65.4
Paper & Pulp	NA	18.9	78.8
Rubber	NA	6.4	73.9
Petroleum	NA	-1.0	78.0
Food & Beverages	NA	-12.2	70.2
Textiles	NA	-16.8	69.1
Other Nondurables	NA	9.1	NA
TOTAL NONDURABLES	-2.9	0.7	72.8
TOTAL MANUFACTURING	-5.0	-7.3	67.0
Mining	NA	-21.2	73.7
Electric Utilities	NA	NA	69.0
Gas Utilities	NA	NA	86.3

NOTE: The new orders data are for February of 1982 versus February of 1981. Profits are fourth quarter of 1981 versus fourth quarter of 1980. Operating rates are for March or February, depending on the industry.

from the near-term capital investment indicators in Chart IV, it appears the sharp drop in spending is occurring right now.

Both Construction and Equipment Will Be Weak

For 1982 as a whole, evidence outside the survey also supports the view that capital spending will be weak, but that it will not

Chart IV. No Strength At all in the Short Term

	-----1981-----			-1982-
	2Q	3Q	4Q	1Q
Non-Defense Capital Goods Orders (Billion \$)	287.2	287.8	269.3	257.7
Construction Contracts-Commercial & Industrial (Millions of Square Ft.)	981.7	881.0	862.7	750.0 ^e
Corporate Cash Flow (Billion \$)	270.5	279.2	272.9	267.0 ^e
Gross National Product (Billions of 1972 \$)	1510.4	1515.8	1498.4	1483.6
Business Equipment Output (Billions of 1972 \$)	114.9	113.7	110.9	106.7
Industrial Operating Rate (%)	76.9	76.2	71.2	68.1
Interest Rate on Corporate Bonds (%)	14.0	14.9	14.6	15.0

NOTE: Dollar and square foot figures are at seasonally adjusted annual rates.

^eEstimate

collapse as it did in 1975. Looking first at the construction side of capital spending, expenditures on office buildings will buttress an otherwise crumbling market. True, contracting for office construction has recently begun to decline (in square feet, it's off 13% from a year ago). But office contracting had been extremely heavy in the past year. So despite the decline, outlays flowing from earlier contracts will remain high for much of 1982. For example, in the first quarter of this year, as contracting sank, office construction expenditures (excluding inflation) surged at an 85% annual rate.

Besides offices, construction of stores and other commercial buildings is also expected to increase this year, though at a modest pace. The reason: These commercial structures closely follow housing activity, which is expected to pick up slowly as 1982 unfolds.

By contrast, other key construction sectors--industrial and petroleum--should show substantial weakness this year. Construction of industrial facilities is highly sensitive to manufacturing operating rates, and at the end of 1981 industry was using only three-fourths of its capacity (Table V)--far below the 91% it would prefer to be using (Table V). When operating rates get that low it typically takes a year or more for industry to reach the point where much new building is warranted. In the first half of 1975, for example, manufacturing operating rates bottomed out at 70%, and it wasn't until early 1977 that real construction of manufacturing facilities began to recover. While 1982 is not 1975, the implication is that inflation-adjusted outlays for industrial buildings should be falling all year.

This conclusion is supported by the survey finding that construction as a share of manufacturers' total capital spending will be 16% this year as it was last year (Table III). That means manufacturers plan to raise construction capital spending only about 4% in 1982, representing a decline in real terms.

Spending on petroleum structures this year will almost certainly decline, too, as the oil glut and accompanying drop in the price of oil reduce incentives to explore for petroleum. The survey found that oil companies expect their total capital expenditures this year to inch up by only 4.9% (Table I), compared to a 17% projection made last

fall. Even if oil prices slide no further, it is not likely that 1982 petroleum expenditures would shoot back to levels planned during pre-glut days.

Summing up construction, strength in commercial structures will work to offset weakness in industrial and petroleum sectors. The upshot: Total spending will not fall out of bed as it did in 1975 (down 12% in real terms). Since commercial construction is less than a third of total building, however, inflation-adjusted construction expenditures will likely show a decline in 1982.

On the equipment side of capital investment, demand for office and store equipment remains strong. With companies trying to combat declining sales by cutting costs, it makes sense that they would continue to invest in small computers and word processing machines even as they cut back on large-scale projects. (Due in large part to increased purchases of this type of equipment, overall equipment purchases rose in the first quarter of 1982.)

But aside from the continuing move to increase white collar productivity, there appears at present no other strong impetus that would lead to a spate of equipment purchases. Apparently reading this same signal, many companies that manufacture equipment are in turn cutting back on their own capital expenditures. Most dramatically, the machinery industry has chopped its 1982 capital spending plans by ten percentage points since last fall. The projected increase now is 4.4% (Table I); but when inflation is factored in (Table VIII) that implies a real decline of 3.9%.

Capital spending for equipment, then, will likely fall in real terms this year compared to last, and the fall will probably be

somewhat sharper than in construction spending, especially in the near term.

Only a Handful Buck the Downtrend

On a industry-by-industry basis, the survey shows that a large number expect to cut 1982 capital expenditures even before rising prices are taken into account. These industries include food and beverages (-13.3%), nonferrous metals (-9.4%), other durables (-7.3%), railroads (-7.2%), airlines (-5.8%), mining (-5.0%), gas utilities (-4.1%), paper and pulp (-1.8%), and autos, trucks, and parts (-1.0%).

On the other hand, the number of industries looking at major 1982 investment plans is limited to three--iron and steel, instruments, and rubber.

Despite battered end markets (autos, household appliances, construction, machinery), iron and steel companies project a capital spending increase of 25.8% this year, followed by a strong 18% advance in 1983. These plans reflect an industry push to cut costs and hike efficiency by employing new equipment. A word of caution, however. Last winter, steel companies expected 1982 capital spending to surge by 40%. That figure is now down to 25.8%, and if business doesn't turn around soon it could be lowered once again.

The instruments industry, expecting a 23.8% investment jump this year, seems to base its strong spending plans on a sustained rise in business. For example, instruments companies expect inflation-adjusted sales to surge by nearly 8% in 1982 (Table VII), far above the manufacturing average of 1%. The industry also expects sales to grow briskly during the next few years, implying that

instruments companies are expanding now to meet the anticipated rise in output. In fact, instruments producers plan to allocate much more of their capital expenditures to expansion than do manufacturers in general (Table II). Not surprisingly, the instruments industry was also using much more of its capacity than were other industries at the end of last year (Table V).

Rubber producers, on the other hand, have plenty of spare capacity and they are coming off a year in which sales tumbled. Nonetheless, the industry plans to boost plant and equipment expenditures this year by 22.6%. That surge, at least in part, must reflect companies' expectations that sales will make a comeback this year and in ensuing years (Tables VI and VII).

Rubber industry plans lose some of their bounce, however, when put into the context of capital spending cutbacks in recent years. Investment hit \$2.17 billion in 1979, then fell to \$1.73 billion in 1980 and recovered only to \$1.77 billion in 1981. Thus, if plans are realized, 1982 investment would just get back to the 1979 level. The 1982 spending boost appears to be part of a two-year investment program, however, with 1983 expenditures slated to spurt once again by more than 20%.

1983 and Beyond: Expecting Expansion

While any hope that 1982 will register a real capital spending gain can be written off, the survey does suggest that the next few years can score some solid advances. Business currently plans to hike new plant and equipment purchases by 7%-8% in each of the next three years. That wouldn't add up to much, it's true, if prices continue to push ahead at 8% a year. But two mitigating factors enter into the interpretation of the 1983-85 projections.

One factor is that inflation rates have been declining, and many forecasters expect inflation to keep on moderating. Thus, 7%-8% capital spending increases could translate into real gains.

More important, companies' projections of capital spending beyond one year ahead tend to understate the actual amount of spending that is eventually done. (For the underestimates made in 1975, see Chart V.) Current capital budgets for 1983 to 1985 are highly

Chart V. 1975 Investment Projections Undershot the Actuals

	-Capital Spending % Change- 1975		Actual Minus Survey Forecast (Percentage Points)
	<u>Survey Forecast</u>	<u>Actual</u>	
1975	5.5%	0.5%	-5.0
1976	7.7	8.7	1.0
1977	4.3	15.5	11.2
1978	5.7	16.7	11.0

tentative, that is, and as those years approach additional projects will likely be undertaken. So a 7% increase planned now for 1983 could well turn into, say, a 13% jump.

In short, the survey's findings for the future years are encouraging--they indicate that survey respondents are optimistic about the economy's ability to recover from the recession and to enter a sustained expansion.

That the economy will recover soon is doubted by few. Whether that recovery will last much beyond 1982, however, is in much doubt. And if a spirited recovery does not develop, today's healthy capital

spending plans for 1983 and beyond could quickly come down with anemia. Case in point: In 1974 survey respondents said they planned to hike 1975 capital spending 4.4%--well above the 0.5% rise that actually occurred.

Looking at plans as they stand at present, however, it appears that capital investment could be on the cutting edge of economic growth in the coming years. More specifically, most of the industries that themselves produce capital goods plan to boost their own expenditures considerably between now and 1985. Excluding the autos, trucks, and parts and aerospace industries, durable goods manufacturers foresee a 31% rise in capital expenditures.

Leading this group is the machinery industry, which expects its purchases of new plant and equipment to surge 57% between 1982 and 1985. Machinery companies also expect to expand capacity by some 13% during the same period (Table IV). Thus, an industry that must be highly disappointed with the Reagan economy thus far apparently expects things to work out well in the future.

Another bright spot in future capital investment plans is in the energy and natural resources sector. The petroleum industry, which includes companies that spend on everything from oil exploration to gasoline stations, projects a capital expenditure boost of 43% in the next three years. And mining companies, which include independent oil drillers, foresee a jump of 50%. Gas utilities, who sometime participate in energy development as well as sell to end users, also have big spending plans for this early in the planning stage--up 31%.

Electric utilities, by contrast, foresee a sharp decline in capital outlays between 1982 and 1985.

Transportation industries show a mixed pattern. The autos, trucks, and parts industry, continuing its effort to retool and looking for sales to get out of reverse gear, plan a modest 19% rise in capital spending over the coming three years. The aerospace industry, meanwhile, projects very weak capital spending--surprising, perhaps, given that demand for military aircraft is almost sure to rise dramatically. Aerospace plans, therefore, apparently reflect a belief that the commercial airline business will remain grounded through 1985.

And, in fact, the airlines themselves seem to agree, since their investment plans show little change between now and 1985. The railroads, on the other hand, project a huge increase in spending, possibly a reflection of their cutback in 1982 plans as well as the significant tax benefits they received in last August's tax law.

Other industries currently projecting large future advances in capital spending include trade and services (29%) and communications and other (31%).

It should be emphasized, though, that investment plans stretching even one year into the future are subject to much change. Nonetheless, the survey results for the years beyond 1982 appear quite robust given that future plans are typically revised upward--if, that is, no new recession intervenes to push them in the other direction.

Notes on the Survey

Results in this report are based on the responses of more than 400 firms to a survey taken in March and April. These firms account for

about one-third of capital spending in the country (Table IX). For capital spending (Table 1), firms supplied dollar estimates of future plant and equipment expenditures. Estimates for each year were summed by industry, and percentage changes between years were calculated. Each industry's percentage change for 1981-82, derived from the sample firms, was then applied to the industry's total capital spending in 1981 in order to derive the industry's total estimated capital spending in 1982. The 1982-83 percentage change was applied to the estimated 1982 total industry figure to derive the industry's total estimated 1983 capital spending. The procedure was the same for 1984 and 1985. Firms with extreme percent changes in spending (outliers) were removed from the sample on a year-by-year basis. The source of the actual 1981 capital spending is the U.S. Department of Commerce. Once each industry's total estimated capital spending was derived, the figures were summed to derive estimates for the various aggregate groupings--durables, nondurables, all manufacturing, all nonmanufacturing and all business.

All data presented in this report other than the capital spending figures are based on percentage--rather than dollar--answers supplied by the sample firms. Percentage responses were weighted by size of firm within an industry to derive industry figures. Figures for the aggregates were then derived by weighting each industry by size. The weighting scheme varied according to the data being processed. For example, percentage changes in sales and product prices were weighted by sales levels while percentage changes in plant and equipment price expectations were weighted by capital spending.

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NOTE: The other durables category listed in the tables includes lumber, furniture, jewelry, toys, and transportation equipment other than autos and aerospace. Other nondurables includes apparel, tobacco, printing and publishing, and leather. The trade and services category includes retail and wholesale trade, banking, holding companies, insurance companies, hotels, laundries, and personal and business services. The communications and other category includes construction firms and transportation services other than airlines and railroads.

TABLE I
PLANS FOR CAPITAL SPENDING
(Billions of Dollars)

INDUSTRY	1981	1982	1981-82	-----Preliminary-----		
	Actual	Planned	% Change	1983	1984	1985
Iron & Steel	\$ 3.17	\$ 3.99	25.8%	\$ 4.71	\$ 4.23	\$ 3.98
Nonferrous Metals	3.46	3.14	-9.4	4.16	4.35	4.36
Electrical Machinery	10.31	10.93	6.0	11.51	12.55	13.35
Machinery	13.22	13.81	4.4	15.58	18.39	21.71
Autos, Trucks & Parts	10.08	9.98	-1.0	9.85	10.56	11.89
Aerospace	6.43	6.43	0.0	5.97	5.87	6.42
Fabricated Metals	2.96	3.08	4.0	3.42	3.60	3.85
Instruments	2.29	2.84	23.8	2.94	3.44	4.07
Stone, Clay & Glass	3.14	3.23	2.8	3.37	3.49	3.57
Other Durables	6.77	6.27	-7.3	7.06	6.94	7.25
TOTAL DURABLES	61.84	63.70	3.0	68.57	73.42	80.45
Chemicals	13.60	14.63	7.6	15.55	16.67	17.26
Paper & Pulp	6.72	6.60	-1.8	7.34	9.24	8.94
Rubber	1.77	2.17	22.6	2.64	2.65	2.57
Petroleum	26.56	27.86	4.9	30.38	37.21	39.97
Food & Beverages	8.22	7.13	-13.3	7.34	7.89	8.47
Textiles	1.56	1.58	1.6	1.68	1.71	1.77
Other Nondurables	6.53	7.53	15.3	6.96	5.97	6.43
TOTAL NONDURABLES	64.95	67.50	3.9	71.89	81.34	85.41
ALL MANUFACTURING	126.79	131.20	3.5	140.46	154.76	165.86
Mining	16.86	16.02	-5.0	18.65	19.71	24.06
Railroads	4.24	3.94	-7.2	6.71	7.44	8.57
Airlines	3.81	3.59	-5.8	3.80	3.41	3.61
Electric Utilities	29.74	33.05	11.1	31.33	29.09	26.49
Gas Utilities	8.65	8.30	-4.1	8.59	9.77	10.89
Communications & Other	45.06	46.11	2.3	50.92	56.23	60.53
Trade & Services	86.33	91.86	6.4	98.21	108.39	118.84
ALL NONMANUFACTURING	194.70	202.87	4.2	218.21	234.04	252.99
ALL BUSINESS	321.49	334.07	3.9	358.67	388.80	418.85

NOTE: The source for 1981 actual spending is the U.S. Dept. of Commerce. The one exception is capital spending by the instruments industry, which has been estimated from U.S. Census data and McGraw-Hill surveys. The figures in this table represent total industry spending, and not just the spending of firms in the survey. Derivation of the projected figures is discussed in the text, under "Notes on the Survey."

TABLE II

EXPANSION VERSUS MODERNIZATION
(Percent of Capital Spending)

INDUSTRY	---Actual 1981--- Replace. & Expan.		--Planned 1982-- Replace. & Expan.		-Planned 1982-85- Replace. & Expan.	
	Expan.	Modern.	Expan.	Modern.	Expan.	Modern.
Iron & Steel	32%	68%	32%	68%	20%	80%
Nonferrous Metals	38	62	38	62	40	60
Electrical Machinery	45	55	46	54	25	75
Machinery	50	50	46	54	44	56
Autos, Trucks & Parts	9	91	8	92	8	92
Aerospace	25	75	19	81	15	85
Fabricated Metals	73	27	46	54	72	28
Instruments	68	32	66	34	65	35
Stone, Clay & Glass	40	60	34	66	28	72
Other Durables	19	81	21	79	19	81
TOTAL DURABLES	36	64	34	66	29	71
Chemicals	46	54	47	53	48	52
Paper & Pulp	51	49	46	54	32	68
Rubber	46	54	41	59	47	53
Petroleum	30	70	31	69	74	26
Food & Beverages	56	44	43	57	29	71
Textiles	28	72	35	65	38	62
Other Nondurables	31	69	31	69	43	57
TOTAL NONDURABLES	39	61	38	62	54	46
ALL MANUFACTURING	38	62	36	64	42	58
Mining	61	39	71	29	58	42

TABLE III

BUILDINGS, MOTOR VEHICLES, AND OTHER MACHINERY & EQUIPMENT
(Percent of Capital Spending)

INDUSTRY	-----Actual 1981-----			-----Planned 1982-----			-----Planned 1983-85----- (Average)		
	Buildings	Motor Vehicles	Machinery & Equipment	Buildings	Motor Vehicles	Machinery & Equipment	Buildings	Motor Vehicles	Machinery & Equipment
Iron & Steel	8%	2%	89%	13%	3%	83%	9%	3%	88%
Nonferrous Metals	9	3	88	8	3	90	7	3	90
Electrical Machinery	18	2	80	18	2	80	18	2	80
Machinery	19	1	81	18	0	81	9	1	88
Autos, Trucks & Parts	21	1	78	18	1	81	17	1	82
Aerospace	31	1	67	28	1	71	21	2	77
Fabricated Metals	10	6	84	9	6	85	9	5	86
Instruments	19	6	69	18	6	76	21	5	73
Stone, Clay & Glass	14	3	83	12	2	86	13	3	84
Other Durables	22	9	70	18	9	73	16	9	74
TOTAL DURABLES	19	3	78	18	3	80	15	3	82
Chemicals	14	1	84	22	1	78	20	1	79
Paper & Pulp	19	3	78	18	2	79	16	2	81
Rubber	19	3	78	17	4	79	19	4	78
Petroleum	10	2	88	11	2	90	9	2	88
Food & Beverages	12	5	83	12	5	83	12	4	84
Textiles	15	7	78	13	4	83	20	3	76
Other Nondurables	8	2	90	8	2	90	7	2	92
TOTAL NONDURABLES	12	2	85	14	2	85	13	2	85
ALL MANUFACTURING	16	2	82	16	2	82	14	2	84
Mining	13	4	83	21	4	75	7	5	87
Railroads	14	2	83	12	2	86	11	2	87
Airlines	9	1	61	6	1	91	6	1	93
Electric Utilities	4	1	94	2	1	97	2	1	97
Gas Utilities	1	2	97	2	2	97	1	3	96
Communications & Other	6	1	92	7	1	87	9	2	87
Trade & Services	30	4	59	31	4	58	27	4	65
ALL NONMANUFACTURING	17	3	77	18	3	76	15	3	79
ALL BUSINESS	16	3	79	17	2	79	15	3	81

NOTE: Sum of percent changes may not equal 100% due to rounding.

TABLE IV
CAPACITY EXPANSION
(Index, 1967=100)

INDUSTRY	1981	1982	1985	Percent Change		
				1980-81	1981-82	1982-85
Iron & Steel	121	124	127	3.4%	2.9%	2.1%
Nonferrous Metals	140	143	146	3.0	2.0	2.2
Electrical Machinery	250	265	313	3.4	5.8	18.1
Machinery	210	212	238	3.1	0.8	12.4
Autos, Trucks & Parts	152	152	153	0.2	0.1	0.3
Other Transportation	180	187	217	4.9	3.7	15.9
Fabricated Metals & Instruments	218	235	292	8.6	7.8	24.0
Stone, Clay & Glass	184	189	203	3.9	2.5	7.5
Miscellaneous Manufacturing	184	188	200	3.2	2.6	5.9
Chemical	238	247	275	4.2	4.0	11.3
Paper & Pulp	180	181	193	4.3	0.3	6.9
Rubber	161	163	173	-0.9	1.7	6.1
Petroleum	145	147	150	0.4	2.0	1.6
Food & Beverages	238	252	274	5.4	5.9	8.7
Textiles	198	205	221	1.4	3.9	7.6
ALL MANUFACTURING	200	209	229	5.2	4.8	9.5
Electric & Gas Utilities	214	218	238	1.0	1.9	9.1
ALL INDUSTRY	192	198	217	2.1	2.9	10.0

NOTE: Index numbers are rounded. Percent changes are based on unrounded index numbers.

TABLE V

CAPACITY - RATES OF OPERATION
(Percent)

<u>INDUSTRY</u>	<u>Yearend 1981</u>	<u>Yearend 1980</u>	<u>Point Difference 1980-1981</u>	<u>Preferred Rate of Operation</u>
Iron & Steel	71.5%	82.6%	-11.1%	92.5%
Nonferrous Metals	72.8	85.8	-13.0	92.4
Electrical Machinery	79.0	82.0	-3.0	90.1
Machinery	70.7	78.3	-7.6	92.7
Autos, Trucks & Parts	60.7	60.4	0.3	88.7
Aerospace	77.0	73.0	4.0	91.8
Fabricated Metals	72.1	83.6	-11.5	91.6
Instruments	91.7	82.6	9.1	94.1
Stone, Clay & Glass	76.1	72.5	3.6	89.8
Other Durables	64.6	80.6	-16.0	84.6
TOTAL DURABLES	71.3	76.4	-5.1	90.5
Chemicals	73.1	77.2	-4.1	84.0
Paper & Pulp	88.5	88.5	0	96.0
Rubber	78.3	77.5	0.8	88.0
Petroleum	71.3	77.7	-6.4	94.8
Food & Beverages	77.1	81.2	-4.1	91.1
Textiles	79.8	85.8	-6.0	94.9
Other Nondurables	88.6	85.7	2.9	95.1
TOTAL NONDURABLES	76.3	80.4	-4.1	92.0
ALL MANUFACTURING	73.9	78.4	-4.5	91.3
Mining	90.5	74.2	16.3	96.8
Electric Utilities	70.0	73.4	-3.4	75.1
Gas Utilities	89.6	89.7	-0.1	96.0
ALL INDUSTRY	73.0	77.7	-4.7	89.3

TABLE VI

SALES EXPECTATIONS
(Billions of Dollars)

<u>INDUSTRY</u>	<u>1981 Actual*</u>	<u>1982 Expected</u>	<u>1981-82 % Change</u>	<u>1985 Forecast</u>	<u>1982-85 % Change</u>
Iron & Steel	\$ 70.93	\$ 74.71	5.3%	\$ 102.46	37.1%
Nonferrous Metals	54.04	57.95	7.2	82.58	42.5
Electrical Machinery	136.58	144.70	5.9	197.52	36.5
Machinery	204.64	223.60	9.3	310.58	38.9
Autos, Trucks & Parts	137.40	153.58	11.8	223.46	45.5
Aerospace	57.17	57.77	1.0	94.05	62.8
Fabricated Metals	123.12	135.83	10.3	208.63	53.6
Instruments	50.23	56.50	12.5	81.36	44.0
Stone, Clay & Glass	49.05	53.13	8.3	70.24	32.2
Other Durables	136.72	146.22	7.0	197.84	35.3
TOTAL DURABLES	1,019.88	1,104.00	8.2	1,568.72	42.1
Chemicals	182.34	192.30	5.5	282.87	47.1
Paper & Pulp	77.75	83.80	7.8	116.73	39.3
Rubber	46.64	51.79	11.0	71.52	38.1
Petroleum	194.70	198.64	2.0	249.69	25.7
Food & Beverages	266.11	284.06	6.7	375.53	32.2
Textiles	50.68	52.71	4.0	66.47	26.1
Other Nondurables	159.65	181.09	13.4	264.39	46.0
TOTAL NONDURABLES	977.90	1,044.38	6.8	1,427.20	36.7
ALL MANUFACTURING	1,997.78	2,148.38	7.5	2,995.92	39.5
Mining	NA	NA	14.0	NA	62.5
Railroads	NA	NA	12.9	NA	42.5
Airlines	NA	NA	6.6	NA	29.4
Electric Utilities	NA	NA	14.3	NA	38.9
Gas Utilities	NA	NA	17.4	NA	55.9
Communications & Other	NA	NA	17.1	NA	44.8
Trade & Services	NA	NA	9.4	NA	34.7

NA - Not Available

* - U.S. Department of Commerce.

TABLE VII

REAL SALES EXPECTATIONS
(Billions of 1981 Dollars)

INDUSTRY	1981 Actual*	1982 Expected	1981-82 % Change	1985 Forecast	1982-85 % Change
Iron & Steel	\$ 70.93	\$ 70.65	-0.4%	* 83.23	17.8%
Nonferrous Metals	54.04	53.88	-0.3	61.96	15.0
Electrical Machinery	136.58	135.21	-0.1	149.68	10.7
Machinery	204.64	213.44	4.3	262.10	22.8
Autos, Trucks & Parts	137.40	143.17	4.2	166.79	16.5
Aerospace	57.17	53.17	-7.0	70.56	32.7
Fabricated Metals	123.12	126.57	2.8	162.26	28.2
Instruments	50.23	54.10	7.7	69.95	29.3
Stone, Clay & Glass	49.05	49.98	1.9	55.63	11.3
Other Durables	136.72	135.35	-1.0	157.14	16.1
TOTAL DURABLES	1,019.88	1,035.52	1.5	1,239.30	19.7
Chemicals	182.34	179.79	-1.4	224.20	24.7
Paper & Pulp	77.75	79.31	2.0	95.17	20.0
Rubber	46.64	47.95	2.8	52.70	9.9
Petroleum	194.70	192.75	-1.0	202.19	4.9
Food & Beverages	266.11	267.97	0.7	294.77	10.0
Textiles	50.68	51.09	0.8	53.29	4.3
Other Nondurables	159.65	167.31	4.8	203.11	21.4
TOTAL NONDURABLES	977.90	986.17	0.8	1,125.43	14.1
ALL MANUFACTURING	1,992.78	2,021.69	1.2	2,364.73	17.0
Mining	NA	NA	6.6	NA	37.3
Railroads	NA	NA	3.3	NA	14.3
Airlines	NA	NA	2.5	NA	13.3
Electric Utilities	NA	NA	3.8	NA	6.4
Gas Utilities	NA	NA	7.9	NA	25.1
Communications & Other	NA	NA	9.2	NA	20.3
Trade & Services	NA	NA	4.0	NA	17.7

* U.S. Department of Commerce.

NA - Not Available.

TABLE VIII
INFLATION EXPECTATIONS

INDUSTRY	Plant & Equipment Price Change (%)		Product Price Change (%)	
	1981-82	1982-85	1981-82	1982-85
Iron & Steel	7.9%	24.4%	5.7%	19.3%
Nonferrous Metals	8.8	26.6	7.5	27.5
Electrical Machinery	7.8	25.0	6.9	25.8
Machinery	8.6	27.5	5.0	16.1
Autos, Trucks & Parts	7.8	23.3	7.6	29.0
Aerospace	9.9	22.8	8.0	30.1
Fabricated Metals	8.8	29.6	7.5	25.4
Instruments	9.1	26.5	4.8	14.7
Stone, Clay & Glass	9.1	24.0	6.4	20.9
Other Durables	9.0	24.3	8.0	19.2
TOTAL DURABLES	8.9	25.3	6.7	23.1
Chemicals	9.1	26.8	6.9	22.4
Paper & Pulp	7.5	18.4	5.8	19.3
Rubber	8.8	29.2	8.2	28.2
Petroleum	8.9	25.6	3.0	20.8
Food & Beverages	9.0	25.7	6.0	22.2
Textiles	6.0	23.3	3.2	21.8
Other Nondurables	7.8	18.2	8.6	24.6
TOTAL NONDURABLES	8.7	24.7	5.2	21.7
ALL MANUFACTURING	8.8	25.0	5.9	22.4
Mining	7.7	21.6	7.4	25.2
Railroads	9.0	27.3	9.6	28.2
Airlines	10.3	28.5	4.1	16.1
Electric Utilities	8.8	27.7	10.5	32.5
Gas Utilities	9.2	30.8	9.5	30.8
Communications & Other	9.4	25.8	7.9	24.5
Trade & Services	8.5	20.9	5.4	17.0
ALL NONMANUFACTURING	8.8	23.8	7.2	22.7
ALL BUSINESS	8.8	24.3	6.7	22.5

TABLE IX
SAMPLE SIZE IN TERMS OF CAPITAL SPENDING

<u>INDUSTRY</u>	<u>% Total Capital Spending Covered</u>
Iron & Steel	78%
Nonferrous Metals	42
Electrical Machinery	33
Machinery	16
Autos, Trucks & Parts	76
Aerospace	29
Fabricated Metals	9
Instruments	50
Stone, Clay & Glass	30
Other Durables	2
Chemicals	44
Paper & Pulp	33
Rubber	25
Petroleum	83
Food & Beverages	26
Textiles	19
Other Nondurables	33
ALL MANUFACTURING	45
Mining	15
Railroads	48
Airlines	38
Electric Utilities	56
Gas Utilities	29
Trade & Services	3
Communications & Other Transportation	49
ALL BUSINESS	33